Monday, 9/10/2007 1:31:26 PM Kim Johnston **Process Sheet** : BRACKET ASSEMBLY **Drawing Name** : CU-DAR001 Dart Helicopters Services Customer Job Number : 34512 : 10278 **Estimate Number** : D3121141 AU: **Part Number** P.O. Number S.O. No. : NA : D3121 REV D 9/10/2007 **Drawing Number** This Issue : N/A Project Number Prsht Rev. : MACHINED PARTS **Drawing Revision** First Issue Material Previous Run Each : 9/30/2007 **Due Date** Written By Checked & Approved By : Est Rev:Pick:A 04.02.18 New issue KJ/DS Comment **Additional Product** Job Number: Description: Seq. #: M174B1000X02000 17-4 SS Bar 1.0 Comment: Qty.: 0.5775 f(s)/Unit Total: 13.8600 f(s) Material: 17-4 SS Bar per AMS 5604/5643 (M17-4-B1.000x02.000) Identify for D3121-111 103089X18pcs M14421X6pcs Comment: BAND SAW Cut blanks: (1.000" x 2.000") 6.600" long HAAS CNC VERTICAL MACHINING #1 Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine D3121-111 as per Folio FA361 and Dwg D3121Identify as D3121-111 2-Deburr 07/11/03 3-Scribe batch number INSPECT PARTS AS THEY COME OFF MACHINE QC2 4.0 Comment: INSPECT PARTS AS THEY COME OFF MACHINE

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W /O:			WORK OR	RK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		,*		:					

Part No: $D3 2 -14 $	_ PAR #:	Fault Category:	NCR: Yes No DQA:	Date: <u>(57/1/1/</u>
		*	OA: N/C Closed:	Date:

		Description of NC	Corrective Action Section B			Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
09/p/3 1	3	port is scrop because	4	Sever By B	5.7.		1	
		Gintura.	POSHUL	WA /	7/10/31		Posicia	RA-10-31
57/10/31	3	1 part thikness is ,002' under thinimum tolerence	LE = 67-11-13	Acceptable. Groove depth measured to be 0.029" and	J.F. (2)		16 07.11.13	7
-		A.C. Part moved in the vice when facing.	QS 1042	Acceptable. Groove depth Measured to be 0.029" and Calculation re-done per stress report. Drawing revised to change groove folkrance.	,,,,,	MA11-13	QSIO42	PA-11-13:

NOTE: Date & initial all entries

Monday, 9/10/2007 1:31:26 PM Date: Kim Johnston Usez: **Process Sheet** Drawing Name: BRACKET ASSEMBLY Customer: CU-DAR001 Dart Helicopters Services Part Number: D3121141 Job Number: 34512 Job Number: Description: Seq. #: **Machine Or Operation:** SECOND CHECK 5.0 QC8 Comment: SECOND CHECK Bolt D312121 1.0000 Each(s)/Unit Total : 24.0000 Each(s) Comment: Qty.: Pick: Description Batch **Qty Part Number** X 18PCS B34522X \$PCS Bolt <u>B335503</u> 1 D3121-21 Bearing Assembly 7.0 D3121241 24.0000 Each(s) 1.0000 Each(s)/Unit Total: Comment: Qty.: Pick: Description Batch **Qty Part Number** T.F. 07/11/03 1 D3121-241 Bearing Ass SMALL & MEDIUM FAB RESOURCE 1 SMALL FAB 1 Comment: SMALL & MEDIUM FAB RESOURCE 1 Assemble D3121-141 as per Dwg D3121. INSPECT WORK TO CURRENT STEP 9.0 QC5 Comment: INSPECT WORK TO CURRENT STEP PACKAGING 1 PACKAGING RESOURCE #1 10.0 Comment: PACKAGING RESOURCE #1 Identify and Stock Location:_ QC21 11.0 Comment: FINAL INSPECTION/W/O RELEASE U 07-1105 Job Completion ...

Form: mrocess

Page 2

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
•								

Part No:	_ PAR #:	Fault Category:	NCR: \	Yes	No	DQA:	Date: _	
			Q	A: N	/C CI	osed:	Date: _	

NCR:			WORK ORD	ER NON-CONFORMANC	E (NCR)			
		Description of NC		Corrective Action Section B	. .	Verification	A	A
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	34512
Description: Bracket	Part Number:	D3121-111
Inspection Dwg: D3121 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article		Prototype
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	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
-	Ø0.392	+0.002/-0.000	0 393'		,		
	0.75	+/-0.030	753"				
. -	0.375	+/-0.010	3 75"		-		
-	2.14	+/-0.030 ~	2 142"	1/			
	0.950	+/-0.010	-955"				ř
	0.600	+/-0.010	600"				
F	1.96	+/-0.030	1,968				
-	0.280	+/-0.010	284"	1//			
r	3.330	+/-0.010	3.305"			,	
T	3.630	+/-0.010	3.634"				•
	R0.25	+/-0.030				27, 196	
-	R0.375	+/-0.010	R, 250'				
y	Ø0.201	+0.005/-0.000	0,201"	1			
'	0.100	+/-0.010	100'				
F	- 10			/-			
-	6,18	+/-0.030	6.170	- V			100
\perp	5.89	+/-0.030	5, 895"				
L	0.080	+/-0.010	,083"			-	
_	0.300	+/-0.010	300"				
	30°	+/-0.1°	30°				
λ_{-}	R0.25	+/-0.030	R 25"		,		
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	100°	+/-0.1°	1000				
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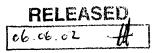
Measured by: JF	Audited by:	Prototype Approval:	N/A
Date: 07//0/31	Date: 07/10/3)	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.01.12	New Issue P/O D3121-141	KJ/RF	
В	04.05.05	Dimensions changed/re-arranged per Dwg revision	KJ/JLM LA	21
С	06.06.14	Dwg Rev. updated	KJ/JLM A	

m. j.



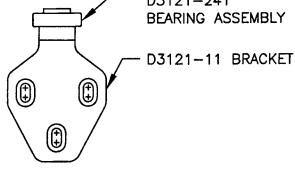
DESIGN DRAWN BY		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHEC	(ED)	APPROVED A	DRAWING NO. REV. D
	Ma.k.	#	D3121 SHEET 1 OF 10
DATE			TITLE SCALE
06.0)5.17		BRACKET ASSEMBLY 1:2
Α		02.04.15	NEW ISSUE
В		03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146
С		04.02.17	ADD CLEARANCE; USE -241 BEARING
D		06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000

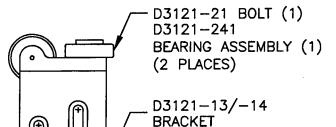


– D3121–2	1 BOLT (1)
D3121-2	41	
BEARING	ASSEMBLY	(1)

D3121-041 BRACKET ASSEMBLY

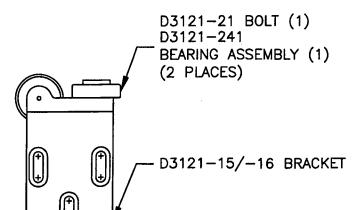
(REPLACES PREMIER P/N B30-23000-33)





D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-37/-38)



D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-35/-36)

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ENGINEERING

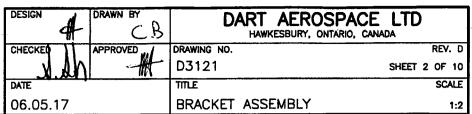
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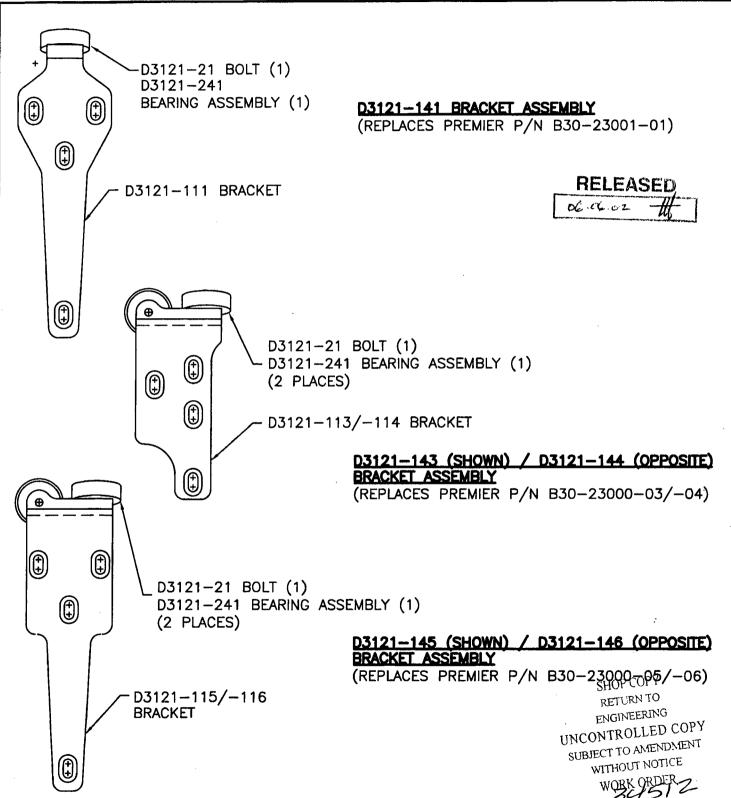
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 34512

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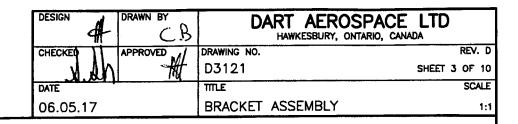




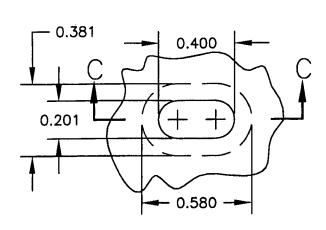


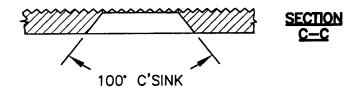
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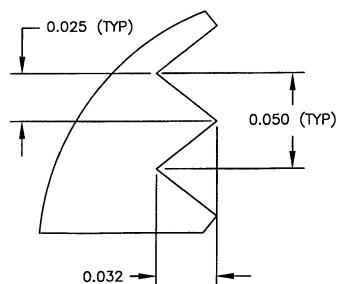








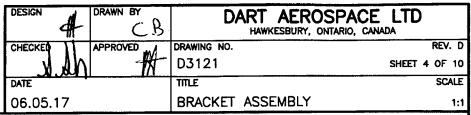
DETAIL B: RIDGE DETAIL PARTIAL SECTION **SCALE 1:20**

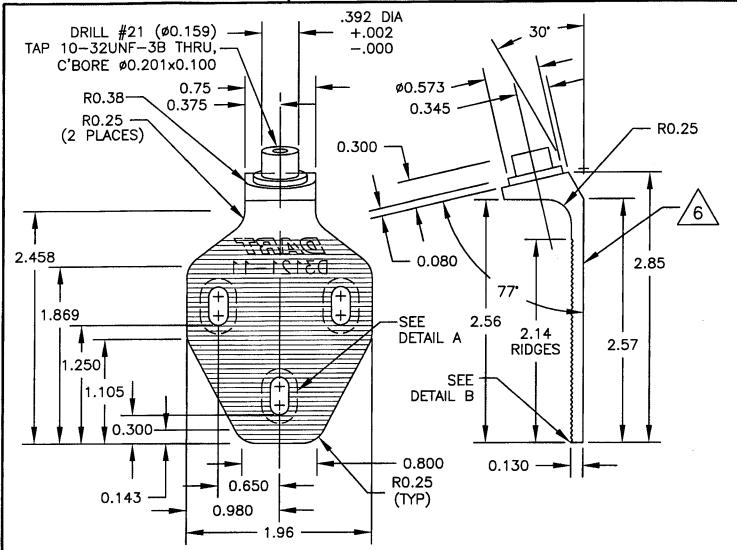


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RELEASED do de 02







D3121-11 BRACKET

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) ENGRAVE DART P/N & LOGO AS SHOWN

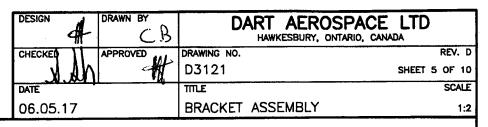
6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

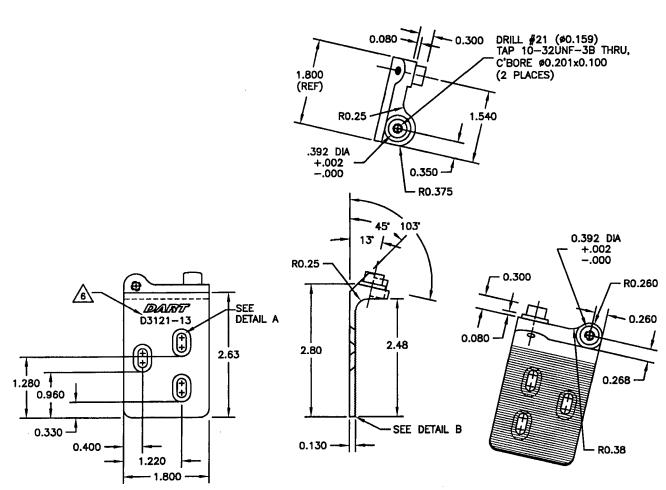
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NO. 34 RELEASED

06.06.02 ·







D3121-13 BRACKET (SHOWN)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) UNCONTROLLED COPY
MIN ULTIMATE TENSILE STRENGTH - 150 Let MIN YIELD TENSILE STRENGTH = 100 ksi

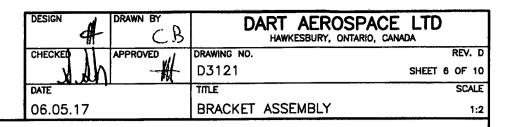
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

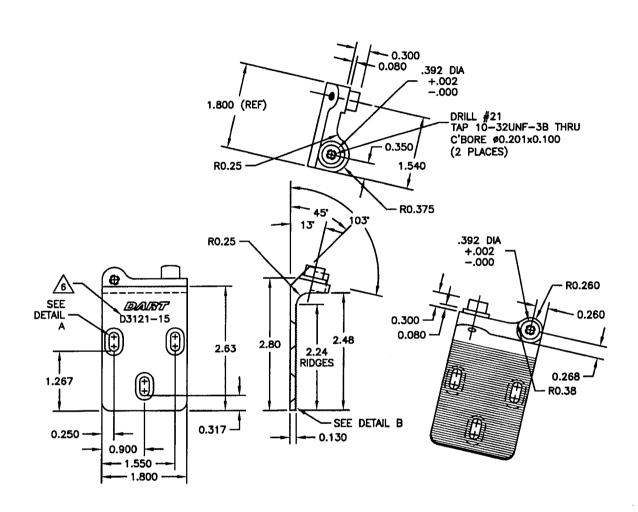
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WORK ORDER

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D3121-15 BRACKET (SHOWN) D3121-16 BRACKET (OPPOSITE) SHOP COPY RETURN TO ENGINEERING

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) UNCONTROLLED COPY
MIN UI TIMATE TENSILE - 150 151 SUBJECT TO AMENDMENT MIN ULTIMATE TENSILE = 150 ksi WITHOUT NOTICE MIN YIELD TENSILE = 100 ksi WORK ORDER

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

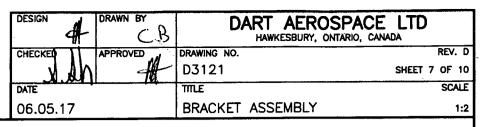
5) ENGRAVE DART P/N AND LOGO AS SHOWN

6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

RELEASED 06 06 02

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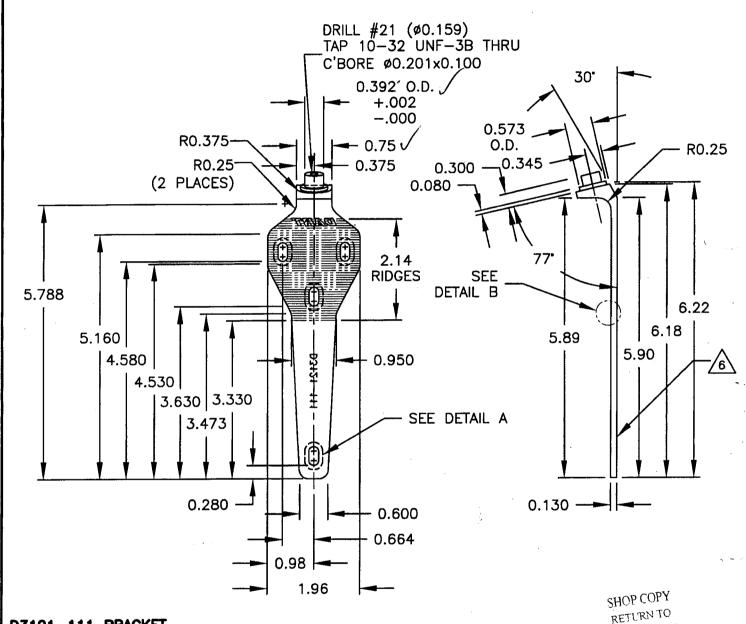




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D3121-111 BRACKET

2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) UNCONTROLLED COPY
MIN THAT TENSILE - 450 SUBJECT TO AMENDMENT WITHOUT NOTICE MIN ULTIMATE TENSILE = 150 ksi MIN YIELD TENSILE = 100 ksi

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED

4) ALL DIMENSIONS ARE IN INCHES

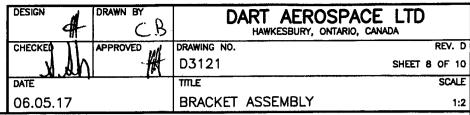
5) BREAK ALL SHARP EDGES 0.005 TO 0.015

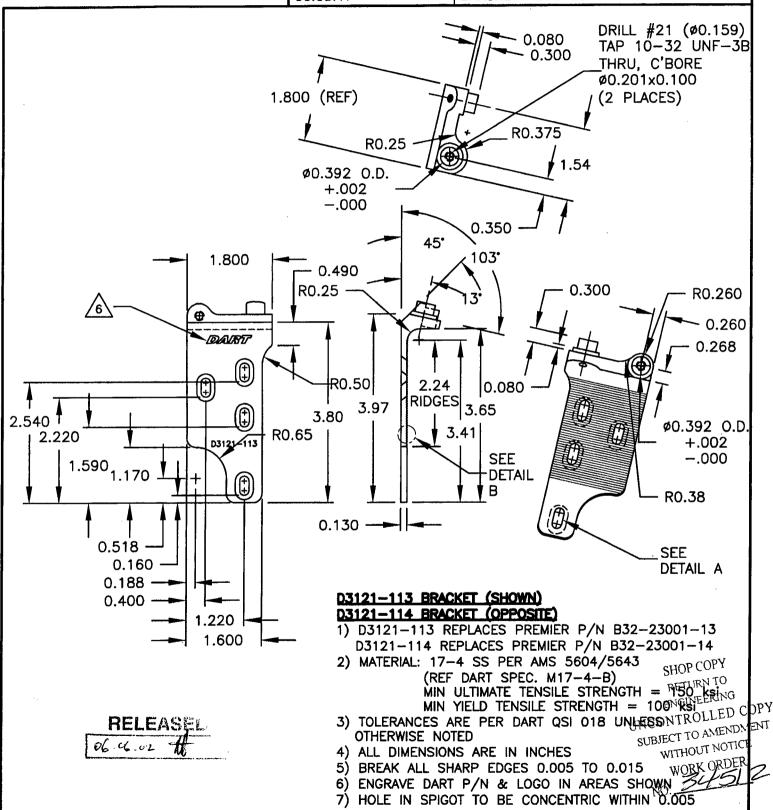
6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN

7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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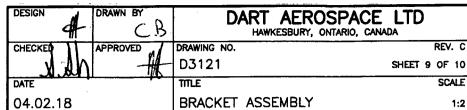


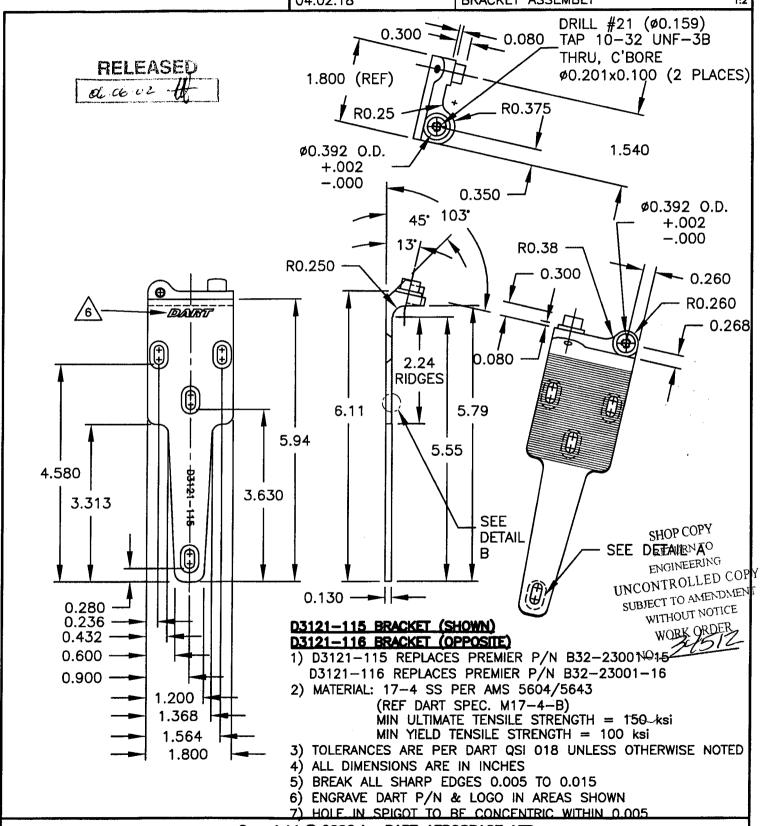




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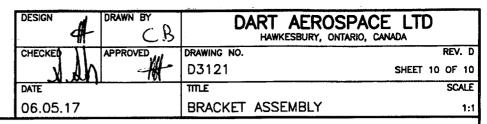


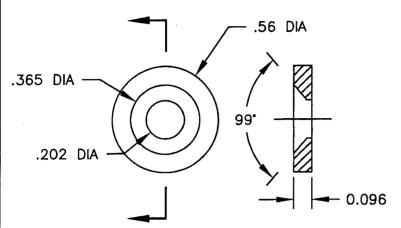




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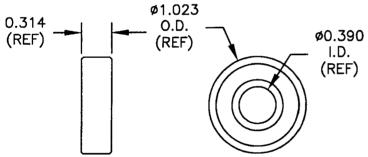






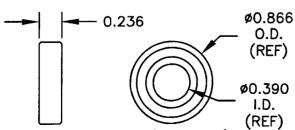
D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCÈS ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



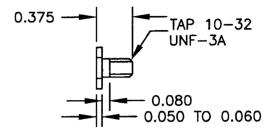
D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



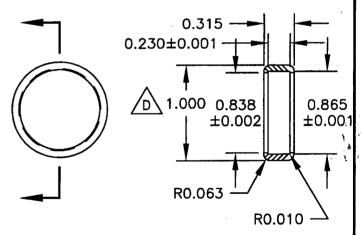
D3121-23 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-21 BOLT (SCALE 1:1)

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25
 - (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART OSI 018 UNLESS OTHERWISE NOTED SHOP CONTROL
- 3) ALL DIMENSIONS ARE IN INCHESETURN TO

ENGINEERING
UNCONTRALED COPY
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SUBJECATO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 24 1 23
BEARING

D3121-241 BEARING ASSEBLY (SCALE 1:1)

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